

Communications Subsystem (CSS)

Introduction

Evan Winston

ewinston@eos.hitc.com

Release A SDPS/CSMS Critical Design Review
15 August 1995

Roadmap



Communications Subsystem (CSS) Introduction



- Context
- Design Drivers & Approach

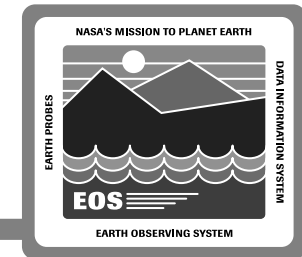
CSS Technology Overview

- Decisions Since PDR
- Technology
- Trades and Prototypes
- Migration

CSS Services

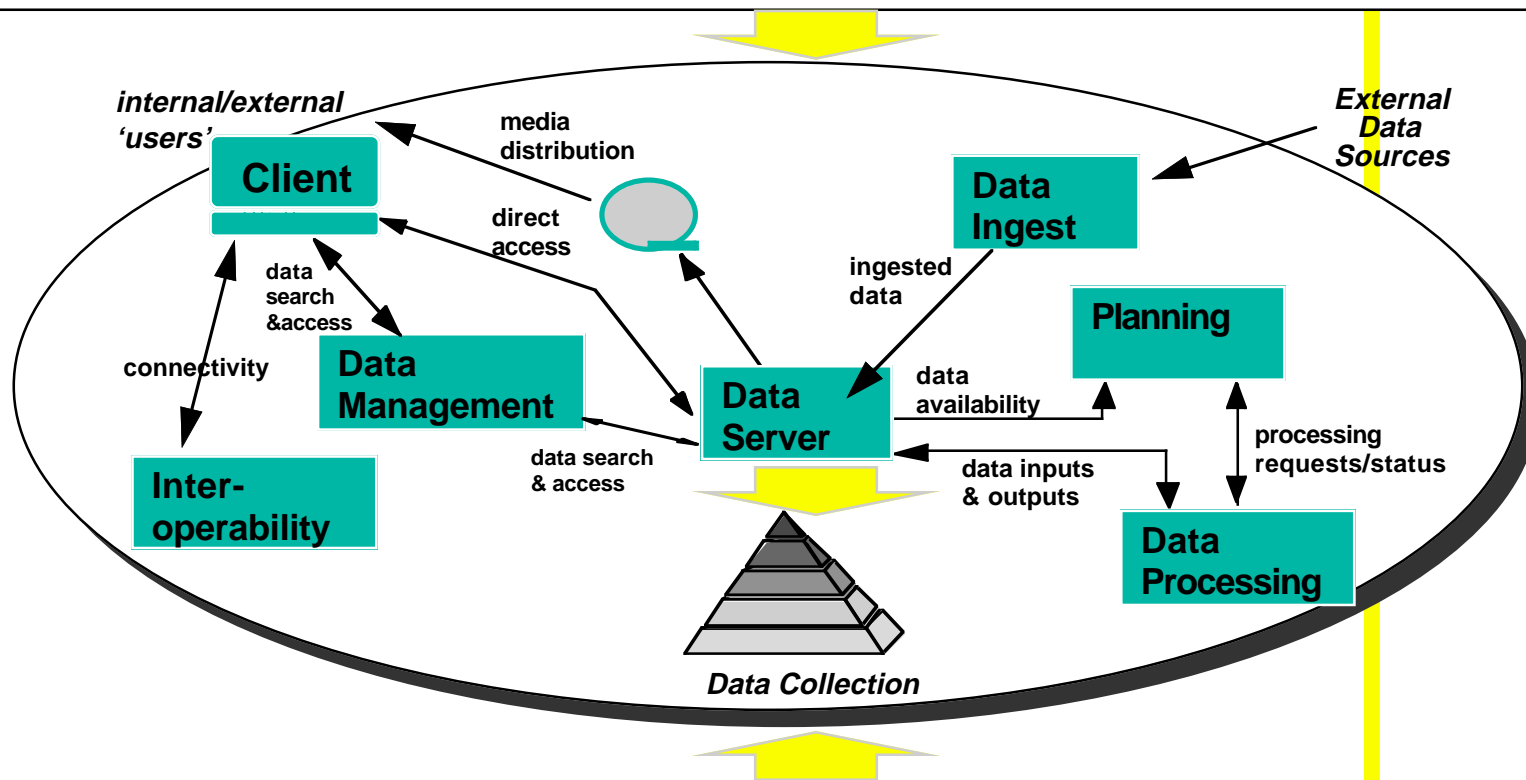
- Distributed Object Framework
- Object Services
- Common Facilities
- Hardware
- Issues
- Wrap-up

Release A Subsystem Interactions



MSS

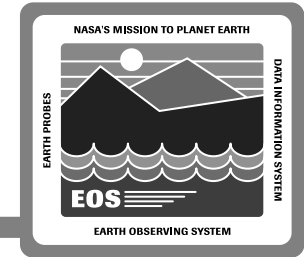
Performance Mgmt, Security Mgmt, Accountability Mgmt
Physical CM, Trouble Ticketing, Ground Events Planning Management Database
Baseline Manager, Change Request Manager, Software Change Manager, Management Agent Services, Lifecycle Services



CSS

Distributed Object Framework
Directory/Naming, Security, Lifecycle, Time, Message Passing, Threads
FTP, Email, Bulletin Board, Virtual Terminal, Event Logger

Definitions



OSF DCE

Today's state-of-the-art solution for industrial-strength, vendor-independent, distributed enterprise computing. It is a widely available multi-vendor client/server communications environment integrated with security, administrative support and directory services.

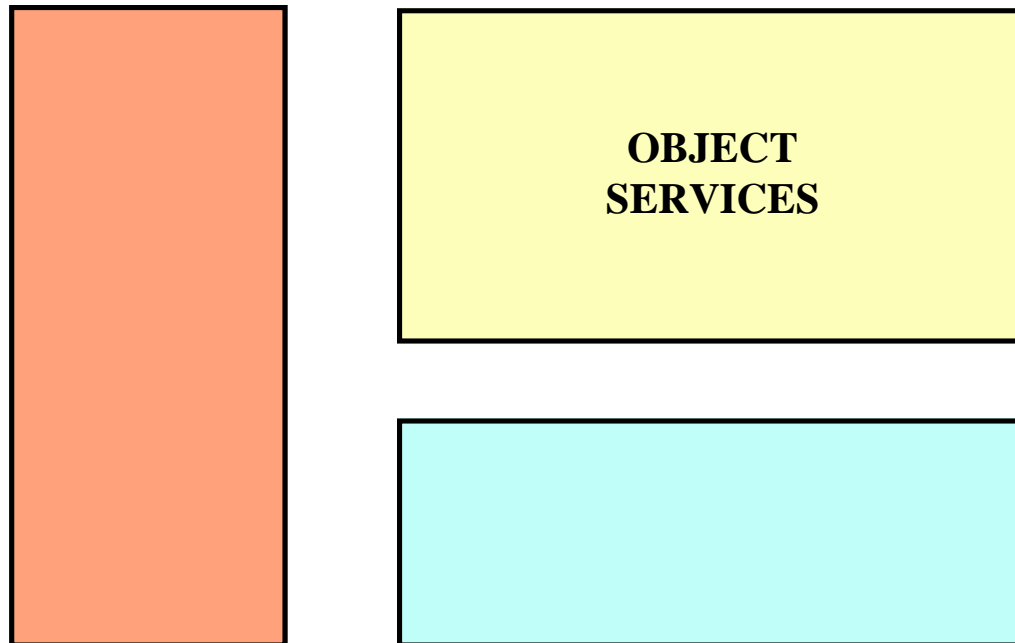
HP OODCE

Object Oriented development environment to DCE. Provides a C++ class library interface to DCE services. OODCE encapsulates many of the complex DCE syntax and commands into powerful, easy-to-use objects.

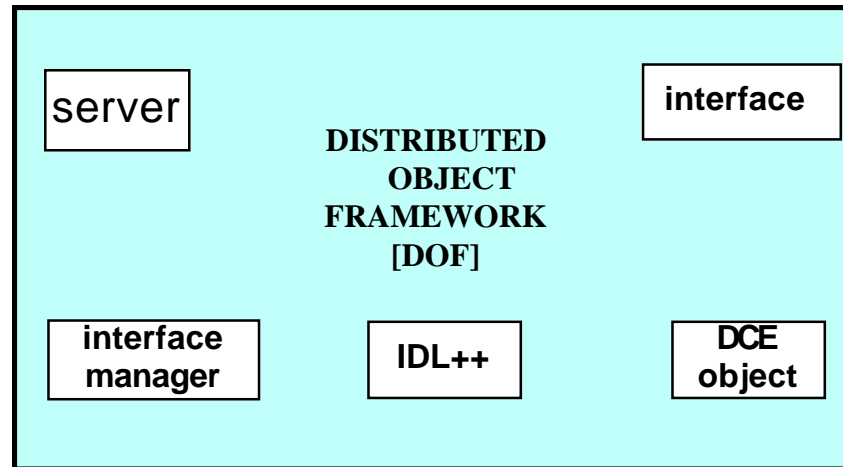
OMG CORBA

Future Object services and common facilities. It will provide a multi-vendor interoperable distributed object development environment. CORBA can offer significant advantages over DCE to the long-term GCDIS/UserDIS architecture.

CSS Components



CSS: Distributed Object Framework

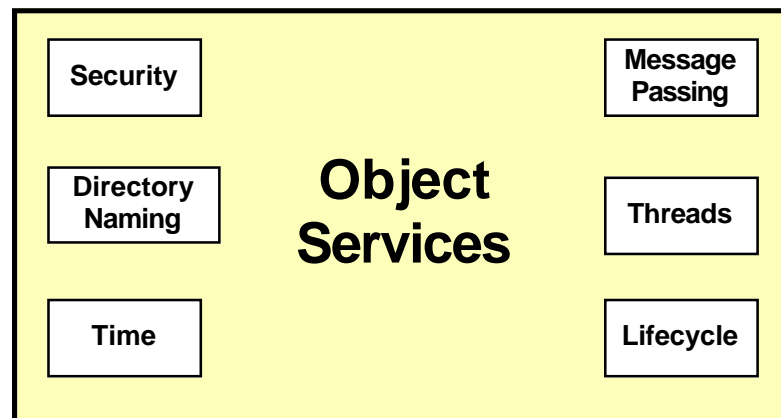


Framework for Distributed Client Server development

Provides an Abstract Interface to Services/Objects

Provided by DCE/OODCE Libraries, IDL++ Compiler, Server and Client Classes

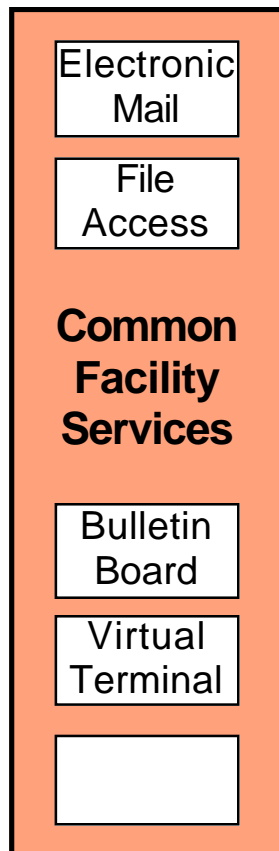
CSS: Object Services



Object Services provide Enterprise-Wide, Transparent, Heterogeneous, Interoperable core services for Distributed Computing

ECS applications interact with them transparently through DOF

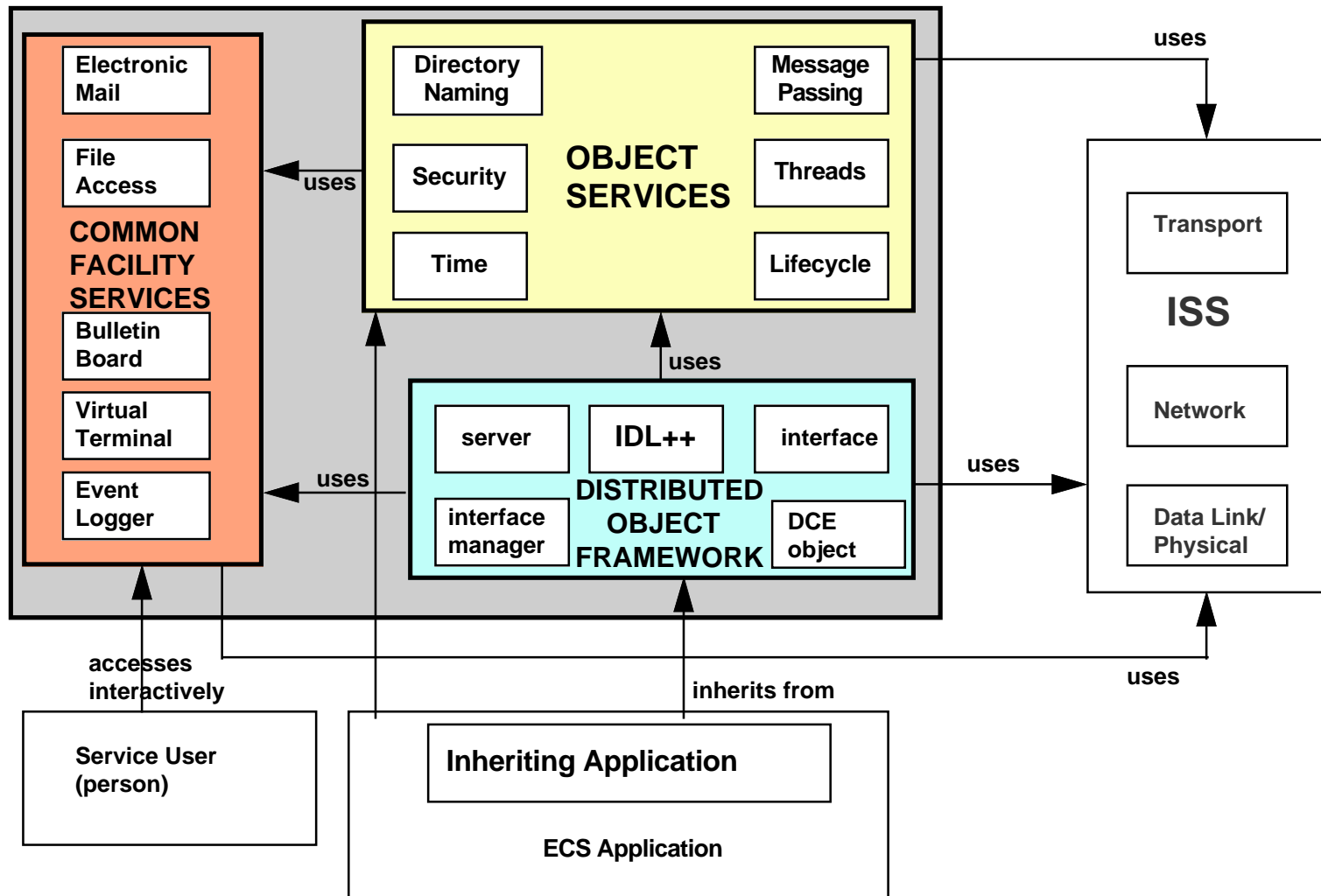
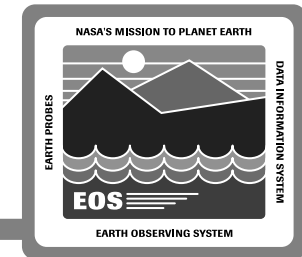
CSS: Common Facility Services



High level uniform semantics that are shared across applications

- **Email provides the functionality to manage electronic mail exchanges between ops users/applications and ops users**
- **File Access provides file transfer and remote/secure file access capabilities across hosts**
- **Bulletin Board provides a forum for sharing ECS related information among the users**
- **Virtual Terminal provides users the capability to remotely/securely log into designated ECS hosts**
- **Event logger enables applications to record important events for reporting**

CSS Subsystem Design



CSS Design Drivers



- **Standards Based**
- **Open Systems (Platform and Vendor)**
- **Smooth Technology Migration**
- **COTS Intensive Implementation**
- **Scalable and Evolvable**

Design Approach

